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ABSTRACT

Voluntary interinstitutional cooperation is examined as a method of overcoming the financial constraints of retrenchment. Findings from 37 case studies on the costs and benefits of various cooperative programs are summarized. The programs reflect both the complexity and variety of interreliance that has evolved among American institutions. It is shown that voluntary interinstitutional cooperation, in addition to other advantages, is and can be cost effective. The programs are divided into six categories: cross-registration, library and media cooperation, cooperative student services, group purchasing, cooperative nontraditional programs, and cooperative academic programs. Cross-registration programs were found to enlarge educational options at little or no extra cost. Library and media cooperation programs were developed out of economic necessity and involve over 90,000 libraries in the U.S. today. Cooperative student services programs provide the needed range and quality of services and at the same time reduce expenditures. These programs include cooperative admissions, career planning, and placement services. Group purchasing, undertaken by a few college consortia, has also proven to be a cost effective measure. The discussions of cooperative nontraditional and academic programs include descriptions of distance learning systems, off-campus programs, shared facilities, and joint academic departments. A list of consortia and their participating institutions is included. (SF)

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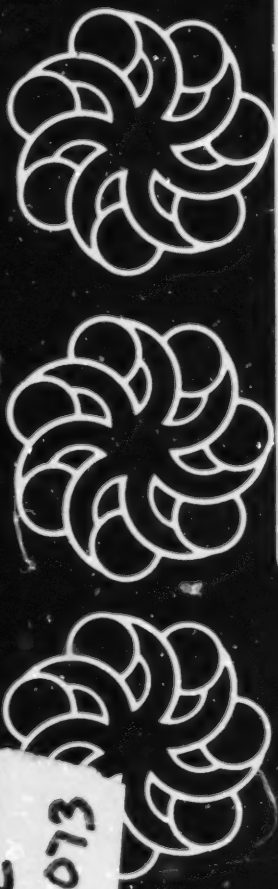
Costing Collegiate Cooperation

A Report on the Costs and Benefits of Interinstitutional Programs with Consortium Case Studies and Guidelines



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COSTING COLLEGIATE COOPERATION

A Report on the Costs and Benefits of Interinstitutional Programs with Consortium Case Studies and Guidelines

Council for Interinstitutional Leadership
Lewis D. Patterson, Project Director

October 1979

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TABLE OF CONTENTS

Foreword I

Summary of Cooperative Cost Savings & Benefits II

Cross-Registration 1
- Cross-Registration—Atlanta University Center 2
- Cross-Registration—Boston Theological Institute 2
- Cross-Registration—Five Colleges, Inc. 3
- Cross-Registration—New Orleans Consortium 3
- Cross-Registration—Pittsburgh Council on Higher Education 4
- Course Exchange—Tri-College University 4

Library & Media Cooperation 5
- Library Cooperation—Tri-College University 6
- Interlibrary Activities—University Center of Georgia 6
- Film Library & Service Center—Union of Independent Colleges of Art 7
- GCLC Film Division—Greater Cincinnati Library Consortium 7
- Media Project—Rochester Regional Research Library Council 8
- Intercampus Delivery System—New Hampshire College & University Council 8
- Libraries Delivery System—Dayton-Miami Valley Consortium 9
- Journals Analysis, Reduction, and Sharing Project—Central Pennsylvania Consortium 9

Cooperative Student Services 10
- Cooperative Admissions Program—Union of Independent Colleges of Art 11
- Admissions Brochure Mailing to High School Students—Hudson-Mohawk Association of Colleges & Universities 11
- Cooperative Admissions—New Hampshire College & University Council 12
- Common Registrar's Office—Graduate Theological Union 12
- Programs to Increase Financial Aid—New Hampshire College & University Council 13
- Career Planning & Placement Services—Atlanta University Center 13

Group Purchasing 14
- Cooperative Purchasing—Hudson-Mohawk Association of Colleges & Universities 14
- Cooperative Purchasing—Massachusetts Higher Education Consortium 15
- Joint Purchase of Employee Health, Accident, and Life Insurance—Council of West Suburban Colleges 15
- Cooperative Purchasing—Associated Colleges of the Twin Cities 16
- Cooperative Surplus Equipment Sale—Hudson-Mohawk Association of Colleges & Universities 16

Cooperative Non-traditional Higher Education Organizational Structures and Distance Learning Systems 17
- John Wood Community College—John Wood Community College 18
- York County Community College Services—York County Community College Services 18
- Mid-Coast Community College Services—Mid-Coast Community College Services 19
- Coastline Community College Library Services Contract—Coast Community College District 19
- Telecourse Production & Distribution—Coast Community College District 20
- Auraria Higher Education Center—Auraria Higher Education Center 20

Cooperative Academic Programs 21
- Department of Social Work—New Orleans Consortium 22
- Educational Administration Programs—Tri-College University 22
- Graduate Study Center—Quad Cities Graduate Study Center 23
- Astronomy Department—Five Colleges, Inc. 23
- Joint Science Department—Claremont Colleges 24
- Bachelor of Fine Arts Degree Program—Greensboro Regional Consortium 24
- Summer School—Greensboro Regional Consortium 25

Consortia and Their Participating Institutions 26

Major Contributing Authors 28

Project Advisory Committee 28

FOREWORD

In the years 1980-95, when there will be a 20% decline in traditional college-age youth, and income from all sources may become depressed, there are four possible courses of action for colleges and universities:

— Survive alone;
— Develop substantial voluntary cooperation;
— Accept publicly mandated coordination;
— Terminate operation.

Given a preference, most institution-based leaders might favor the order in which the choices are presented above. Yet, given current and projected economic conditions, "going it alone" does not appear to be a realistic alternative. If that proves true, the critical question is whether or not voluntary cooperation can provide a more cost effective and humane alternative than statutory coordination.

The Council for Interinstitutional Leadership (CIL), with the aid of a 2-year grant from the Carnegie Corporation of New York, conducted 37 case studies of the costs and benefits of cooperative programs. These investigations document that voluntary interinstitutional cooperation, in addition to other advantages, is and can be cost effective.

This monograph summarizes the findings which are presented in full detail in the CIL Report, *Costing Collegiate Cooperation*. In presenting the case studies, CIL recognizes that the art of cooperative cost analyses is still in its infancy (as is true for all of higher education). Therefore, for a full understanding of the validity, savings, and benefits reported and of the analyses methodology used, reference is made to the unabridged report.

The cooperative programs sampled herein reflect both the complexity and the variety of interreliance that has evolved among American institutions. Indeed, there is no single model for college cooperation.

Summary of Cooperative Cost Savings and Benefits

The numbers reported below are based on the most recently available data and are, in most cases, for a one-year period. Additional information is presented in the brief descriptions of programs that follow. The most complete details on each case study are found in the CIL's October, 1979, Report (440 pages).

Cross-Registration

Atlanta University: derived value of instruction, $1,518,000.

Boston Theological Institute: 1,200 cross-registrations; 8.5% of all registrations; not quantified because institutional costs of instruction are not available.

Five Colleges, Inc.: derived value of instruction, $1,889,000.

New Orleans Consortium: derived value of instruction, $102,000.

Pittsburgh Council on Higher Education: $211,000

Tri-College University: $451,000

Library and Media Cooperation

Tri-College University: joint film center, avoidance of duplicative books, and joint cataloging, $50,416; benefits of sharing journals not quantified.

University Center of Georgia: inter-library delivery service, $6,287; inter-library book savings reported by 1 of 10 librarians, $9,010.

Union of Independent Colleges of Art: joint film center, $124,460.

Greater Cincinnati Library Consortium: joint film center, $26,956.

New Hampshire College and University Council: inter-campus delivery systems, $44,168.

Dayton-Miami Valley Consortium: inter-library delivery system; insufficient records on 18,125 bulk deliveries invalidates a quantifying of savings.

Central Pennsylvania Consortium: journal sharing, $10,000.

Rochester Regional Library Council: joint film center, $47,335.

Cooperative Student Services

Union of Independent Colleges of Art: Cooperative admissions; average benefit of $67,667 for each institution.

Hudson-Mohawk Association of Colleges and Universities: joint student recruitment, $34,000.

New Hampshire College and University Council: cooperative admissions, $34,953.

Graduate Theological Union: common registrars office, $85,214.

New Hampshire College and University Council: $27,000 invested over 2 years helped generate $4,409,191 in additional student financial aid monies.

Atlanta University Center: joint career planning and placement services; savings for each institution $14,500.

Group Purchasing

Hudson-Mohawk Association of Colleges and Universities: joint purchasing, $106,280.

Associated Colleges of the Twin Cities: joint purchasing, $42,373.

Hudson-Mohawk Association of Colleges and Universities: cooperative surplus sale, $12,450.

Council of West Suburban Colleges: cooperative employees insurance program, $92,000.

Massachusetts Higher Education Consortium: joint purchasing, $669,000.

Cooperative Non-Traditional Programs

Coast Community College District: telecourse production; difference in production costs and income over 7 years, $521,662; gas savings for students nationally, $6,300,000.

Coastline Community College: contracted library services; cost avoidance over 7 years, $8,500,000.

Auraria Higher Education Center: FTE cost of instruction averages 20-25% less for three institutions.

John Wood Community College: contracted institutions avoid building costs and reduce instructional costs; no figures given.

Mid-Coast Community College Services: outreach community college program; cost of instructional savings, $151,912.

York County Community College Services: outreach community college program; cost of instructional savings, $338,396.

Cooperative Academic Programs

New Orleans Consortium: consortium department of social work with costs 2-3 times more if sponsored independently by each of the 3 members; no figures.

Tri-College University: joint educational administration program of 3 colleges would cost $62,457 more if offered independently by 2 members.

Quad-Cities Graduate Study Center: graduate center saved $1,330,000 in instruction and $1,422,716 in student travel.

Five Colleges, Inc.: saved on facilities, equipment, and faculty; attracted outside funding; no figures given.

Claremont Colleges, Inc.: joint science department; 3 colleges maintained one classroom/laboratory complex with one set of faculty; no figures given.

Greensboro Regional Consortium: joint Bachelor of Fine Arts; costs would be 2-3 times greater if the 3 colleges had independent programs.

Greensboro Regional Consortium: consortium summer school, $80,000.

CROSS-REGISTRATION

Cross-registration has been adopted as a formal program of cooperation among some 50 consortia of colleges and universities. Until this study was undertaken, however, there was no empirical analysis of whether the programs met their objectives. The study reviewed cross-registration programs at 6 consortia to: (1) assess their effectiveness, enlarging the potential for study through opening academic doors to students which their own institution could not open except through the consortium, (2) measure student use of the programs, and (3) compare cross-registration costs with its benefits estimated in dollar amounts. The 6 consortia were chosen for their varied characteristics. Their memberships: 3 liberal arts colleges; a liberal arts college and 2 state universities; 4 liberal arts colleges and a state university; 4 liberal arts colleges, a theological center and a private university; 9 theological schools; and 4 liberal arts colleges, a business college, a theological school, a community college, and 3 universities.

No problems were encountered in the collection and analysis of data on the increases in academic opportunities and the student use of those opportunities, but there were problems in the cost-benefit analysis. Only 1 consortium estimated its program's costs. Senior officers of colleges and universities usually preferred that the costs not be estimated, viewing them as small and not worth measuring. Another, more fundamental objection commonly stated was that measuring the costs would be contrary to the purpose of cooperation, which is for the mutual benefit of the institutions and their students, faculty, and staff. There was interest in the measurement of cross-registration benefits, although opinions differed on the merits of various ways to measure them. The method selected sets the benefit value as equivalent to an allocation of the institutional costs at the institution offering the courses. If, for example, cross-registration accounts for 2% of an institution's registration and its direct instructional costs are $3,000,000, a monetary estimate for cross-registration's benefits is set at $60,000.

The main findings are uniform. The programs meet their objectives either fairly well or extremely well. The praise is high; the criticism is muted. Educational options are being enlarged to the extent sought by the member institutions and are being used by students, at little or no cost except where inter-campus bus service is provided. The ratio of benefits to costs is extremely high regardless of how costs and benefits are measured.

CROSS-REGISTRATION PROGRAM
Atlanta University Center (AUC)

AUC, founded in 1929, is the nation's largest private center for the higher education of black students. Institutional members include 4 liberal arts colleges, a graduate-level university, and a theological center.

The central administration, with a staff of 100, administers 22 formal cooperative programs and assists with other cooperative activities, including cross-registration. Academic cooperation, specialization, and interdependence are cornerstones to AUC operations. Eighteen undergraduate majors are offered only at 1 college; 10 are offered only at 2 colleges. Cross-registering is routine. To take a major sequence on another campus is common. Yet the institutions closely guard their autonomy and distinctive characteristics. Open cross-registration, highly-developed registration procedures, close physical proximity, joint academic planning, a network of interinstitutional councils, a pervasive sense of collegiality, and academic specialization are primary reasons for 8,500 cross-registrations, or 11% of all course registrations at the 6 institutions in 1977-78 (9,400, or 12.9%, in 1976-77). About one-fourth or one-fifth of junior and senior registrations regularly are cross-registrations. The costs of administering the program cannot be estimated but are small. The derived value to students for 1976-77 was calculated at $1,518,000.

CROSS-REGISTRATION PROGRAM
Boston Theological Institute (BTI)

BTI is a consortium of 9 graduate theological schools and seminaries in the Greater Boston Area. The type of institutions, the nature of the curricula, and the size of enrollments result in a high cost per student.

In keeping with their ecumenical spirit, BTI members utilize cross-registration to enlarge academic opportunities and to open doors for interdenominational discussion and understanding. The program is used largely for electives, although it also serves a joint doctoral program offered by 2 schools. The one restriction is that no more than 50% of a student's degree program may be earned through cross-registration. In 1977-78, there were over 1,200 cross-registrations which represented 8.5% of all registrations. The only costs recorded are for printing cross-registration forms and the *BTI Catalog*. No cross-registration funds are exchanged by students or institutions. Three of the 9 institutions, which account for 52% of the cross-registrations, do not calculate their own "instructional costs." Likewise, there is no campus interest in estimating cross-registration costs. Thus, a monetary measure of cross-registration benefits and costs based on hard data is not possible. The benfits are in expanded opportunities for students to diversify their education while studying at a number of distinquished institutions.

COURSE INTERCHANGE PROGRAM
Five Colleges, Inc.

Cooperation in the Connecticut River Valley, which has a history far back into the 19th Century, is now highly developed among the 4 liberal arts colleges and 1 state university. The aim of cooperation is to provide the best possible education for students and wider intellectual opportunities for faculty from the resources of all five institutions. The availability of cross-registration has facilitated joint majors, joint degrees, unique majors, and even joint departments.

A bus system, free to users, moves over 780,000 passengers annually among the 5 campuses for academic, cultural and social activities. Students have a vast array of courses to choose from, and cross-registration is encouraged through strong support services — frequent buses, libraries, interchangeable meal plans, numerous publications, ease in registration procedures. Cross-registration recently reached a plateau of some 6,000 course registrations annually. In 1977-78, it accounted for 11.6%, 10.1%, 5.2%, and 5.1% of registrations at the four colleges and 0.8% at the University. The derived value of instruction received by students from the program is calculated at $1,889,000 in 1976-77. The major added cost is the $260,000 expended annually for the transportation system.

CROSS-REGISTRATION PROGRAM
New Orleans Consortium (NOC)

NOC is comprised of 3 diverse, Catholic, liberal arts colleges: historically black, all-female, and co-ed. Consortium purposes include increasing course offerings, alleviating unnecessary duplication, and improving race relations among faculties and students.

Cross-registration, an original program of the Consortium, led to the establishment of the NOC Social Work Program, which is the first accredited consortium department of social work in the nation. Cross-registration also made possible a Unique Majors Program which permits students to concentrate their studies on another campus in 36 major areas.

Cross-registration accounts for 1.4% of the total registration or about 2,000 credit hours per year. The addition of a shuttle bus system among the campuses in the past year is expected to increase intercampus activity. The normal 6-hour limit per term for full-time students is not applicable to the Social Work and Unique Majors Programs. No tuition is exchanged except for lab fees.
Cross-registration is used to improve resource allocation and avoid costs. Based on cost of instruction, the derived value for cross-registration was $102,000 in 1976-77. Students "avoided" $132,622 in tuition fees because of the cross-registration program.

CROSS-REGISTRATION PROGRAM
Pittsburgh Council on Higher Education (PCHE)

PCHE was founded in 1966 to strengthen communication and cooperation among 16 diverse colleges and universities in Allegheny County: public/private, co-ed/all-female and community college/liberal arts college/state university. The Council provided a means for them to undertake joint studies and support cooperative programs. It speaks with a common voice and with influence on key public issues.

Cross-registration is utilized primarily by juniors and seniors. A full-time student may take courses at any PCHE campus, but ordinarily is limited to 1 cross-registered course each term. The basic premise of the program is that it be operated without publicity and promotional efforts. Officers insist that there are no significant program costs except cross-registration forms. In recent years, despite difficulties of transportation and schedules, about 1,000 students have used the program annually. Of 317 undergraduate programs in PCHE's institutions, 86 are offered by only 1 institution. Cross-registration in the individual institutions accounted for between 0.2% and 1.3% of all registrations in 1977-78. It is estimated that 4% to 5% of the undergraduate students use the program over a 4-year period. The program's derived value for 1976-77 is calculated at $211,000.

COURSE EXCHANGE
Tri-College University (TCU)

TCU is a voluntary consortium of 2 public universities and a private college located in 2 states, Minnesota and North Dakota. TCU is the first consortium in the nation to be accredited for the granting of degrees.

Course Exchange (cross-registration) began in 1966, 4 years before TCU was founded. The establishment of formal academic cooperation between the states of Minnesota and North Dakota in a tuition reciprocity agreement was modeled in part after the Tri-College University program. Students from both states may enroll in the other state's university at in-state tuition rates, and they do, reducing the use of Course Exchange. Concordia students may take 1 course per term in Course Exchange, but students of both universities may use the program without limitation. The complementarity of academic programs is strong: of the 136 major programs in TCU, 97 are offered by only 1 institution. From 1975-76 to 1977-78, cross-registration as a percent of annual total registration varied from a 0.3% to 0.5% at Concordia, and from 1.8% to 3.5% at the universities. The derived value of Course Exchange in 1977-78 is set at about $451,000, compared to program costs of $33,400.

LIBRARY AND MEDIA COOPERATION

Interlibrary cooperation is an old concept whose practice began to take on real significance in the mid-1960s, thanks, in part, to federal legislation in the 1966 amendment of the Library Services and Construction Act of 1964 and subsequent federal appropriations. The most recent national inventory of library cooperation, *The ASLA Report on Interlibrary Cooperation 1978*, notes 92,801 libraries in the U.S. and 750 single-type, multi-type, and interstate cooperatives and networks.

On the voluntary side, library sharing occurs either through single-purpose and special-purpose arrangements dedicated solely to library cooperation or through multi-purpose consortia which include library cooperation as one of several programs. Frequently, voluntary systems are inseparably intertwined with state-supported systems.

A 1975 national study identified 38 program areas in which academic library consortia participate. They range from centralized acquisitions and processing to binding services to media loan, production, and rental to the production and maintenance of union catalogs and lists. In the case studies that follow, areas of cooperation include film rental, delivery services, union catalogs, serials lists, audio-visual resource pools, and journal sharing.

There are numerous reasons for library cooperation, but perhaps the most convincing is economic necessity. It is widely acknowledged that no single university can afford to continue financing the same level of acquisitions each year when the annual price rise is so far ahead of the average economic growth and general cost of living indexes.

Procedures for assessing the costs and benefits of library cooperation, however, are not widely acknowledged. Thus, a range of assessment techniques were used in the case studies. The most simple and practical approach, where possible, is to compare the costs and benefits without cooperation to the costs and benefits with cooperation. Although such comparisons are often theoretical, they remain valuable indications of the cost benefits of library cooperation.

For academic institutions and consortia considering library cooperation, Ruth Patrick's *Guideline for Library Cooperation (1972)*, can be helpful. Development of library cooperation for academic consortia includes four phases; they are (1) *exploratory*, during which desired benefits and potential members are identified; (2) *planning*, during which objectives, organization, financial support, and facilities are identified; (3) *development*, during which activities, personnel, implementation schedules, policies, and evaluation processes are identified; and (4) *operation* and *evaluation*, during which trial activities, evaluation, modification, full implementation, and evaluation are conducted.

TCU LIBRARY COOPERATION
Tri-College University (TCU)

Library cooperation among TCU's 3 institutions began in the mid-1960s and predated the founding of the general purpose consortium. The library directors operate administratively on a triumvirate base with the director at each institution having responsibility for one or more active task forces. Areas of cooperation include a joint film library, a union list of books, a union list of serials, access to major data banks, twice-daily shuttle service, and cooperative purchasing and processing.

The joint film library during 1977-78 operated at a collective cost of $31,732 to handle 3,808 bookings. The same film usage based on vendor rates would have cost $58,453. The cost avoidance thus was $26,721.

In the same year TCU librarians saved $19,558 by avoiding duplicative purchases of 712 books and by avoiding related costs for processing the books. A related savings of $4,137 was realized in cataloging through joint participation in OCLC. The $18,385 expenditure for 15,321 corporate first time uses would have cost $22,522 if cataloged independently.

Through a Union List of Serials, students have access to 10,877 different journals. During 1977-78, the shuttle service delivered 26,015 photo copies and 250 periodicals. The value of these benefits are difficult to quantify.

INTERLIBRARY ACTIVITIES
University Center of Georgia (UCG)

UCG, founded in 1938 and incorporated in 1948, is a general purpose consortium with the expressed objective of facilitating "the exchange, on a basis fair to each institution, of as many resources and facilities as might be practical including books, laboratory equipment, special services and the like. . . ."

Interlibrary activities in which UCG institutions participate include the Union Catalog begun in 1940, interlibrary use and truck service, audio-visual resources pool, and related networks. The budget for UCG in 1978-79 included $27,500 for Union Catalog operations, $64,470 for Interlibrary Loan Truck Service, and $30,000 for other non-library programs and administration.

Use of the Union Catalog among UCG institutions has increased from 3,719 in 1971-72 to 9,000 in 1977-78. Aiding the use of the Union Catalog is an intercampus truck service. A recent survey of members revealed that 3,004 books were delivered by the truck during July-December 1978. The librarians further estimated the annual postal and purchasing savings at $6,287.

The head librarian of one of the 9 member institutions estimated the benefits occurring to his institution from UCG participation was $9,010 in 1978-79 for interlibrary borrowing and for resource people.

FILM LIBRARY AND SERVICE CENTER
Union of Independent Colleges of Art (UICA)

The UICA Film Center was established in 1971 in order to make high quality films readily available to faculty and students of member institutions. Usage between 1977-78 and 1978-79 increased 13.7% or from 1,553 film bookings to 1,766. The 351 holdings, collected over an 8-year period, cost approximately $140,000. Of the $140,000, $47,000 was paid by UICA member institutions and the balance was paid from contributions by the Carnegie Corporation of New York, the federal government, and other private sources.

All operational support for the Film Center is provided by UICA. The fee for each of the 9 institutions in 1977-78 was $916 which yielded a total income of $8,244. The only additional charge for using the films is return postage. The cost savings to members are substantial. After paying the membership fee, colleges can use the collection as much as they like. Savings to each institution are calculated by assigning the lowest available rental charge from commercial vendors for each film used from the Center. A cost avoidance of $37,589 in 1975-76 increased to $124,460 in 1978-79, representing a 231.5% increase in dollar savings. The per institution fee of $916 in 1978-79 provided an average financial benefit of $12,912.

FILM DIVISION
Greater Cincinnati Library Consortium (GCLC)

GCLC, founded in 1973, is a multi-type cooperative of 26 academic, public, school, and special libraries. In the Spring of 1977, 11 of the 26 members began to acquire a central educational film collection. The primary premises for the cooperative collective were: (1) non-print media are an integral part of teaching/learning programs, and (2) films are expensive to rent. By the summer of 1979, the GCLC film collection had expanded to 129 holdings. The 11 participating members share the costs of new acquisitions in proportion to their respective materials budgets.

During the first year of acquisitions, 1976-77, the film division spent $7,589 for 21 films. In 1977-78, it spent $22,225 for 74 films. From July 1977 through June 1979, the 95 films were shown 854 times. The films, would have cost 15% more to rent than to purchase during the first 2 years of the GCLC Film Division's operation. Savings in film rentals during the second year were $26,956.

GCLC paid film delivery costs from its central budget to encourage institutional use. The delivery costs were not deducted from benefits because if the films had been procured from a vendor, the institutions would have had to pay postage and insurance fees or a delivery charge.

MEDIA PROJECT
Rochester Regional Research Library Council (RRRLC)

RRRLC, founded in 1966, is 1 of 9 multi-type regional library councils in New York State. Comprised of 55 academic, special, research libraries and public library systems, RRRLC has an annual budget in the range of $200,000 with support coming from federal and state sources, foundations, and member fees.

Since initiating the Media Project in 1973, RRRLC has expended $100,316 for the purchase of 296 films at an average cost of $339 per film. The Council charges a $5 to $6 user fee each time a film is loaned in order to generate additional income for new films.

A savings to the 18 user institutions in 1978-79 has been calculated by subtracting the user fees charged to each institution from the user fees that would have been charged to each institution had commercial vendors been used. From July 1, 1978 to June 30, 1979, the institutions used films 1,331 times at a collective cost of $6,658. Fees charged by vendors for the same usage would have cost $53,993; thus, $47,335 was saved through the RRRLC Media Project by participant institutions.

INTER-CAMPUS DELIVERY SYSTEM
New Hampshire College and University Council (NHCUC)

NHCUC, founded in 1966, is a general purpose consortium comprised of 13 public and private institutions. In the area of interlibrary cooperation, the Council initiated an Inter-Campus Delivery System to the member institutions, the central office, and the State Library in 1979. The number of items delivered in 1977-78 was 79,886, a figure which represents a 15.2% volume increase and a cost item reduction of 1.8¢ from the previous year. Of the 79,886 items which were delivered, 16,809 were books, 36,003 were pieces of mail, and 27,054 were packages. (Had the 16,809 books been borrowed at the not uncommon rate of $8, the charge would have been $134,000 excluding return postage and packaging. Had the books been purchased, they would have cost $15 to $20 each to order, receive, catalog, store, and maintain.)

The University of New Hampshire, which administers the Delivery System for NHCUC, reported costs of $18,187 or 22.8¢ per item in 1977-78. The 22.8¢ figure for per item handling represents an approximate postage savings of $44,168. The figure is determined by subtracting program costs of $18,187 from the estimated $62,355 expenditure that would have been incurred through regular postage service.

LIBRARIES DELIVERY SYSTEM
Dayton-Miami Valley Consortium (DMVC)

DMVC, founded and incorporated in 1967, is a general purpose consortium with 15 member institutions. The librarians, the most active group in the Consortium, have developed a van delivery system which is administered by Wright State University for the Consortium.

Wright State reported costs of $18,332 for the delivery system during 1978-79 and projected costs of $18,545 for 1979-80, giving an average cost of $18,440 for the 2 years. This is a 16% increase over the 1977-78 costs of $15,930. If the projected costs for 1979-80 are accurate, however, the average annual increase will be reduced to 8%. During 1978-79, the system delivered 18,125 packages for an average cost of 88¢ per package. With a 20% projected increase in deliveries during 1979-80, the cost per item will decrease further despite the increased member cost.

Costs to the institutions for the service are determined by dividing the total annual costs by the number of daily stops. In 1978-79, there were four pairings of institutions where a single pickup and delivery station was shared. The costs per station in 1978-79 were under $1,600. Monetary benefits were not estimated. The most concrete evidence of cost effectiveness is that the institutions underwrite the program.

JOURNALS ANALYSIS, REDUCTION, AND SHARING PROJECT
Central Pennsylvania Consortium (CPC)

CPC, founded in 1968, is a general purpose consortium of 4 four-year, church-related institutions. In 1971-72 the CPC Board designated library cooperation as a high consortium priority. Between 1972-76, the chief college librarians, faculty members, and consortium director reviewed all journals in all disciplinary areas subscribed to by the four libraries in order to determine which subscriptions should be dropped and which should be maintained.

By the end of the 4-year period, the project had achieved 4 specific benefits: (1) It had generated among the 4 colleges a continual net savings of $10,000 per year in terms of 1972-73/1975-76 dollars; (2) It brought the library staffs into a closer, more richly cooperative stance; (3) It generated an accurate, up-to-date list of all journal subscriptions and back runs, by department, across all 4 campuses, and (4) It provided specific cost effectiveness data for use in fund raising.

The $10,000 saved yearly did not remain idle, but was reinvested either for new journals or to meet the increased costs of journal subscriptions.

COOPERATIVE STUDENT SERVICES

Student services are providing a fertile field for collegiate cooperation. The rapid development of these services emerged along with the active extension of humanizing practices, beginning in the 1930s, and kept pace with the advancement of the social sciences. In the 50s and 60s, these services exploded, as did enrollments, the wholistic view of learning, and the needs of learners. This expansion attempted to keep ahead of students' needs, as well as of institutions, as the numbers of enrollees grew. Student services attempted to bridge the gap that developed between size and effectiveness, complexity and opportunity.

When there were adequate funds, an expansion of student services was possible; in the 70s, however, adequate funding rapidly diminished, even though the need continued.

How, then, could higher education provide the needed range and quality of services, while holding the line or reducing expenditures and maintaining or improving services? A careful re-thinking of student services was required of institutional leadership.

To those consortium leaders engaged in substantional relationships with others in their community of colleges, their work together provided a natural base on which to build selected functions within a comprehensive range of student services. In those cases where care was exercised in the analysis of the operations of a given service, and administrative follow-through occurred to define appropriate sharing in these operations, substantial student services in consort emerged. The record of achievement documented in this chapter provides evidence of worthwhile gain to the institutions and to their student beneficiaries.

As colleges and universities confront the economic demands of the 80s, each institutional offering and each administrative service will be reviewed to ascertain its value. As institutional budgets are constricted, valuable services to students should not be strangled. To discontinue student services merely because institutional leadership cannot perceive alternative strategies for organization and operation would be at once counter-productive and a tragedy.

Institutional board members or chairpersons, presidents, vice presidents, and deans should now advance the exploration and definition of joint services in designated areas by calling for a careful detailing of the systems and procedures used in each service function. Analysis of the commonality of the functions in comparison with those of other institutions in a group defined as their community will give specification to those functions which are amenable to development in consort.

COOPERATIVE ADMISSIONS PROGRAM
Union of Independent Colleges of Art (UICA)

Nine visual arts colleges, in consort, operate a cooperative admissions program designed to enlarge the pool of applicants through a nationwide recruitment program and to improve the quality of admissions efforts through research on the market of art students, the publications nationally and internationally distributed, and the training of staff members. The program includes market research, joint publications (a 28-page brochure, a 16-page career resources list of career opportunities, leaflets, posters, a special newsletter, press releases, and advertisements), nationwide recruitment visits to high schools and junior colleges each year, and portfolio days for prospective students. Each member college invests $10,000 annually in the program, which also has received support from private sources.

Member college presidents, academic deans, business officers, and admissions directors in 7 of the 9 institutions responded to the question: "If the UICA were dissolved, what would be the costs to your college of replacing the services received from this program?" As a return on their $10,000 investment, the 7 colleges estimated their benefits from cooperation to be from $49,500 to $120,000 per year, for a total of $629,200 and an average benefit of $67,667 for each institution.

ADMISSIONS BROCHURE MAILING
Hudson-Mohawk Association of Colleges and Universities (HMACU)

Thirteen colleges and universities in the Capital District of New York State shared a concern for a diminishing pool of potential freshmen. In September 1978, over 40,000 admissions brochures, with return postcards, were distributed to high school students. A 2.73% return was realized. The program demonstrated cost effectiveness in two ways. It produced the names of 1,031 potential students for the member colleges, at low cost, and it emphasized each campus's location in a broad context that the individual institutions could not provide.

A recent study revealed that 83 of every 1,000 people who inquire about an institution actually enroll. Further, colleges spend an average of $380 per matriculant for admissions/recruitment. Assuming, then, that approximately 90 students attended one or another of the member colleges, the benefit resulting from obtaining these students' names was $34,000.

Many of these names would no doubt have been received anyway, through normal efforts, but the program produced the names earlier in the school year and gave the institutions more time for contact and cultivation. Also, the effort emphasized, to students and to the people in the academic institutions, the advantages of this urban area for college-going purposes.

COOPERATIVE ADMISSIONS
New Hampshire College and University Council (NHCUC)

The NHCUC and its Admissions Committee publish cooperative admissions brochures, sponsor visits to the 12 member institutions for high school guidance counselors, and organize joint recruiting programs for counselors, parents, and high school and transfer students. The activities provide a clearinghouse for information concerning areas of study, admission procedures, and financial aid options available at the member institutions. Also, a study was made of various states' scholarship and grant programs, as well as their reciprocal arrangements. Over 80% of the total cost of the program ($50,000) was supported by federal funds, with the member institutions underwriting the remainder.

Student inquiries rose from 5,000 in 1976-77 to 15,000 in 1978-79, with the result that 191 students can be attributed to the consortium's effort this year. The per registrant cost for the effort was $262. Since the estimated national average cost per registrant for the 1979 entering freshman class is $445, the actual costs avoided were $34,953. This was an amount equal to 70% of the amount actually spent for the consortium's cooperative admissions program. The resulting tuition and fee income derived by each institution far exceeds its investment in consortium-wide admissions work.

COMMON REGISTRAR'S OFFICE
Graduate Theological Union (GTU)

This ecumenically inclusive theological center, comprised of 10 institutions in California, was founded in 1962 to prepare men and women for professional ministries in religious communities and society. It provides full access to the course offerings of all its consortium institutions. Such curricular interreliance reflects an economic capacity for each of the institutions far beyond (at least 33%) its current level of expenditure. The services provided by the GTU Common Registrar's Office embrace all aspects of registration and cross-registration. During the past 3 years, the number of students registered has increased 118%, while the operating budget has increased only 4%. The basic per unit cost, therefore, has decreased from $54.54 to $31.69.

The total cumulative expenditure for all registrar's functions (1977-78) was $113,286. If each member institution operated its own registrar's office, its annual cost would be $198,500. The net annual economic gain to the member colleges, therefore, is $85,214. If the individual colleges were to replace the Common Registrar's Office and again provide their own services within their separate institutions, they would face an increased per institution cost of 75.2% over expenditures made during the year of record.

PROGRAMS TO INCREASE FINANCIAL AID
New Hampshire College and University Council (NHCUC)

NHCUC and the New Hampshire Postsecondary Education Commission are committed to the goal of insuring that students can pursue a postsecondary education at a time that is convenient and at a price that is affordable. Projections revealed that the college-going population in the state would drop 61% by 1985 and 32% by 1991, with a resulting decrease in revenues of approximately $25 million between 1976 and 1991. Also, there was concern that other New England states enrolled a higher percentage of students than did NH. Thus, efforts were made to improve the NH Incentive Grant Program, develop an incentive for the state's banks to participate in the Federal Government Insured Loan Program, heighten student use of the Basic Educational Opportunity Grants, and increase the pool of Government Insured Loans available to students. The cost of developing these 4 programs was $27,000 over a 2-year period.

A long-term stream of state and federal grants and new bank loan funds has been generated, reaching a total of $4,409,191 for the most recent 12 months in which actual figures were gathered, and an estimated $7.6 million for the 12 months underway when the report was written.

CAREER PLANNING AND PLACEMENT SERVICES
Atlanta University Center (AUC)

The Career Planning and Placement Service of the AUC is a year-round operation, cooperatively planned and operated, and integrated with the individual career planning and placement efforts of the 6 consortium institutions. It provides information and counsel to all students of the member institutions, aiding them in planning and choosing appropriate and productive careers. It also provides programs and activities which allow students to explore career fields and opportunities in various employing sectors or advanced study at graduate and professional schools. Further, it arranges on-campus recruitment for permanent employment, involving representatives from business and industry, government, educational systems and other non-profit institutions, as well as recruitment by graduate and professional schools, and provides information and assistance to students seeking part-time and summer internships or special summer study programs.

The costs of the Career Planning and Placement Service total $132,300. If the member colleges operated their own individual services only, it is estimated that they would be spending $146,800 to accomplish alone what now is being done in a most successful manner because it is a cooperative experience. Thus, each of the colleges comprising the Center realizes a cost advantage annually of $14,500.

GROUP PURCHASING

Only a few consortia have undertaken voluntary cooperative purchasing, but the experience has been rewarding for those that have. The Massachusetts Higher Education Consortium, building on the earlier experiences of Five Colleges Inc. and the Ohio Inter-University Council Purchasing Group, for example, provides participating institutions with a 10% to 20% savings on purchases made cooperatively. The Hudson-Mohawk Association of Colleges and Universities (HMACU), comprised of 15 institutions, saved its participating members $68,000 and $106,280 in its first 2 years of cooperative purchasing. Success required direct "orders" from an important chief executive officer, agreement among several other presidents to cooperate, and willing purchasing officials. The activity is a rewarding one for the Association.

After the presidential directive was received, the purchasing agents agreed on product lines that promised savings through quantity purchases. The group estimated their annual campus requirements and agreed on product specifications. Invitation-to-bid letters were sent to every vendor used by the colleges; local newspaper ads alerted others. A bid opening date and time were set, sealed bids were received and opened, and the purchasing agents reviewed the bids and product samples. Usually the lowest bid is accepted unless there is good reason to do otherwise. The campuses made a good faith commitment to buy from the successful bidder. Thereafter, all relationships took place between vendor and the campus: all contacts by sales or servicemen, all deliveries and invoicing, all warehousing. In short, good standard purchasing practices were followed, with Association staff providing only administrative support.

HMACU started its purchasing with fuel oil, miscellaneous office supplies and paper, and now has 11 contracts for 10 colleges. Other groups have started with other products. The specific initial product is not as important as is an agreement to start. Savings average in the 10% to 20% range, with larger purchasers realizing the smaller percentage but more dollars because of volume. The smaller institutions experience the reverse. It is difficult to understand why more colleges do not undertake group purchasing. Hospital groups, in contrast, purchase great quantities of products cooperatively. HMACU has found that money can be saved even though the participants also have access to an effective state purchasing system.

An indirect benefit from group purchasing is that the purchasing officials for the colleges, in dealing with the same vendors and companies, often have similar problems. By comparing notes and experiences, insights and additional savings often can be realized.

COOPERATIVE PURCHASING
Massachusetts Higher Education Consortium (MHEC)

Five Colleges, Inc., in Massachusetts, began cooperative purchasing in 1967 in one of the first such efforts in America among colleges and universities. When the Governor's Office in 1975 showed interest in improving management in higher education throughout the state, a group of college administrators formed the Massachusetts Higher Education Consortium to improve buying practices specifically. MHEC decided to negotiate joint contracts for the benefit of member campuses. They began with the contracts negotiated through Five Colleges, Inc. with particular help from the University of Massachusetts at Amherst. First contracts were placed for 34 member institutions but later the number of participants increased to 41.

After designing and printing the required bid forms and stationery, bids were collected for 29 products in 1977-78 and for 36 products in 1978-79. Quarterly reports are kept showing each institution's activity under each contract, detailing product list price, average discount, net sales, and dollars saved. In 1977-78, 41 vendors received over $1.5 million in business under the program. The list price value of the material purchased was more than $2.2 million, with member schools enjoying a gross savings of $669,000, which is 30% of the gross price.

JOINT PURCHASING OF EMPLOYEE INSURANCE
Council of West Suburban Colleges (CWSC)

CWSC established a cooperative life insurance and accidental death and dismemberment plan for employees in 1974 and added a health contract in 1975. Together, they provide an impressive example of cost effectiveness through cooperation. Business officers from 4 institutions collaborated to determine the broad guidelines for insurance coverage and to select an experienced broker with a good position among underwriters to negotiate the contract. They agreed that a commitment to a long term relationship was important in order to build a creditable history and to offset negative reactions to losses which would inevitably occur to members of the group.

The principles on which the plan was built were that: (1) economies of scale result from increased volume (size of group) and controlled risk (minimize claims through design of plan and effective claim control); (2) administrative efficiency results from consolidation and services, and (3) the larger the group, the more advantageous its position for negotiating cost reductions.

Projected savings for the period December 1974-March 1976 were $181,386. After $46,360 was paid in claims, the net savings for the 15 months was $135,360.

Data available for the 6-month period, February 1 to July 31, 1977, show that an additional $46,000 was saved by participating institutions.

COOPERATIVE PURCHASING
Associated Colleges of the Twin Cities (ACTC)

In November 1976, ACTC laid out a careful plan to buy cooperatively. They agreed on a series of steps to undertake which included: (1) collecting evidence of cost savings through volume purchasing; (2) establishing a User Committee of business and purchasing officers to service joint purchasing, and (3) obtaining Board approval of their plans. They initiated the process using the consortium executive director but hired a part-time business coordinator in October 1977. The group began by purchasing paper towels, toilet tissue and plastic bags; bond and xerographic paper; light bulbs; and fertilizer. They went on to develop cooperative programs in bulk mail handling and mail processing.

At the end of April 1977, the coordinator reported savings of $22,437, against which expenses amounted to less than $10,000. During the next 6 months, during which time the expenses were less than $5,000, the cumulative savings climbed to $42,373.

The ACTC Users Committee agreed that savings were even greater because (1) standardization of product had occurred, thus alleviating the expenses of dealing with different products; (2) lower priced alternatives had been identified, and (3) the campuses worked hard to increase their typical order quantities to build total volume, thus realizing other benefits.

SURPLUS EQUIPMENT SALE
Hudson-Mohawk Association of Colleges and Universities (HMACU)

As an outgrowth of cooperative purchasing, HMACU purchasing officers ran a cooperative surplus equipment auction in July 1977. The colleges decided each had a problem with equipment which no longer served a useful purpose, but would provide additional income if sold. Cooperative management of an auction could spread the administrative costs over a larger amount of salable equipment and simultaneously rid the campuses of space-filling "junk".

A variety of material was identified, space for the auction was set aside on a host campus, and the process of accumulating material began. Each piece was tagged so it could be identified by campus when sold and lists of the major items were prepared both for record purposes and to help produce effective newspaper advertisements. An auctioneer was hired and the auction, which was publicized, ran over into a second day. Approximately 150 bidders attended the sale. No bad checks were received and the great bulk of the equipment was sold. About $14,000 was realized from the sale, which cost $1,550 to run, including the auctioneer's commission of 7% and the expenses incurred for advertisements and other items.

COOPERATIVE NON-TRADITIONAL STRUCTURES AND DISTANCE LEARNING SYSTEMS

Winston Churchill's perceptive description of Russia, "A riddle wrapped in a mystery in an enigma," would apply equally well to the various cooperative, non-traditional structures now being employed by an increasing number of institutions to deliver higher education programs. A growing conservatism on the part of taxpayers and public officials, which began in the late 1960s, has led to an emphasis on the more efficient use of existing financial, physical, and human resources, the elimination of unnecessary duplication, and the maximization of access and services to learners.

Across the U.S., there are dozens of non-campus colleges, outreach programs, and satellite campuses. Just as non-campus colleges have made it possible to provide educational opportunities for those who cannot or do not wish to travel to a traditional campus, new educational systems that utilize technology and media have made it possible to provide instruction for audiences removed from any formal classroom setting.

The case studies that follow deal with distance learning (Coastline), off-campus library arrangements (Coastline), shared facilities (Auraria), a contractual mechanism for purchasing instruction and services from several institutions (John Wood), and off-campus learning centers organized to serve geographically distant students (York County and Mid-Coast). "Non-traditional" seems to be the most appropriate collective term for describing the great variety of programs which deviate from the customary structure and approach of higher education.

Non-traditional educational consortia, like non-traditional institutions, have emerged because they meet needs and enable activities that could not be accomplished as well or at all unless new structures were created. In the past, colleges and universities have not been noted for giving priority interest to interinstitutional cooperation. Where substantive cooperation has occurred and worked, it usually has resulted from financial and academic interests which could not be addressed by individual institutions.

The case studies presented in this report are not the only examples that could have been used. However, the cooperative arrangements described are representative of similar activities taking place in other parts of the nation. Because there is no established methodology to assess the costs and benefits of non-traditional systems, each case analysis had to be developed based on the best comparative data available. Though these initial studies focused primarily on cost effectiveness, there obviously were other very significant educational benefits in each case as well.

NON-CAMPUS COMMUNITY COLLEGE
John Wood Community College (JWCC)

JWCC was established in 1974 at Quincy, Illinois, as a public community college district without a traditional brick-and-mortar campus. Serving an area of 1,823 square miles with 90,000 people, the College offers comprehensive, high-quality, low-cost, postsecondary programs through contracted arrangements with 7 area colleges for staff and facilities. The geographical dispersion of the participating institutions maximizes student access.

The students, averaging 29 years in age, are free as consumers of education to select courses from the institutions which best meet their needs. In using the "common market" approach, JWCC provides access to 60 areas of concentration: 37 in occupational curricula and 28 for baccalaureate transfer. An obvious savings is the cost avoidance of a large physical plant. Administrative offices, library space, and classrooms for 15 teachers, which the College employs directly to supplement other available programs, are leased from a seminary.

The Net Institutional Cost for JWCC in FY 1978 for 39,825 semester credits was $54.90 per hour. The average and median costs for the 38 traditional community colleges in Illinois were $57.30 and $60.97. In FY 1979, student credit hours at JWCC increased to almost 43,000 but cost data for the state are not yet available.

OFF-CAMPUS LEARNING CENTER
York County Community College Services (YCCCS)

Established in 1973 as Maine's first community college without a campus, YCCCS is a cooperative venture that delivers certificate and associate degree programs to sparsely populated York County. The 1,000 square miles were unserved previously by on-site higher education programs. The outreach program is administered by 3 institutions in cooperation with schools, libraries, hospitals, and churches.

Now in its sixth year, YCCCS has 85 courses, 10 degree programs, and 725 students. Two learning centers at Biddleford and Sanford allow students in one stop to: receive academic counseling, be admitted to a college program, register for courses, apply for financial aid, and pay tuition and fees. Classes taught in a dozen locations have served over 4,000 individuals since 1973. A survey revealed the average student is over 30; 90% are the first in their family to attend college, and they could not attend without low cost and availability close to home.

YCCCS avoids costs because it owns no buildings. Its instructional costs in 1976-77 were $290,045 for 314 FTE or $923.71 per FTE. Using the average University of Maine system costs at $2,160.21 per FTE, the difference in the YCCCS approach represents a savings of $338,396 in a single year.

OFF-CAMPUS LEARNING CENTER
Mid-Coast Community College Services (MCCCS)

MCCCS, patterned after York County Community College Services in Southern Maine, began operations in 1975 after a higher education report identified the mid-coast region as one where postsecondary educational opportunities were greatly limited. The plan to provide these services involved the University of Maine at Augusta, 2 vocational-technical institutes, and the local boards for vocational education. The latter provided office space and assistance with community contacts, while the vocational-technical institutes provided counseling services for those pursuing postsecondary vocational training.

In addition to providing on-site academic counseling and administrative services, MCCCS has secured a toll-free number for area residents to call the University of Maine at Augusta. Associate degree level programs included criminal justice, liberal studies, business, secretarial science, and nursing. A recent regional survey indicates health, business, and social science are the areas of greatest demand.

The instructional costs for MCCCS in 1977-78 were $130,470 for 107 FTE, or $1,279 each, and in 1978-79 were $153,885 for 121.3 FTE, or $1,269 each. When compared to the average FTE costs for the University of Maine system at $2,344 for 1977-78 and $2,521 for 1978-79, the differences represent savings of $108,630 and $151,912 for the 2 years.

OFF-CAMPUS LIBRARY
Coastline Community College (CCC)

CCC is 1 of 3 colleges in the Coast Community College District located on the coastal edge of Orange County, California. The district, encompassing 550,000 people, has regularly impacted over 40% of the population with comprehensive programs and services. CCC began in the fall of 1976 with over 20,000 students.

The key concept in forming CCC was to use existing resources in the community rather than build a traditional campus. It serves students at over 150 sites throughout the district of 105 square miles. Rather than build a campus-based library, which CCC projected would cost $3,000,000 to build and $5,922,450 to operate for 7 years, it has negotiated a contract with Huntington Beach Library and Cultural Center to provide needed services for $60,000 annually. The cumulative contract costs of $420,000 over 7 years therefore represents a cost avoidance of $8,500,000 for the same period. Viewed another way, CCC projects annual operational costs of a permanent facility at $905,500 and $957,800 for the fourth and fifth years. On this basis, the annual contractual costs are less than 10% of the traditional costs. CCC maintains that public opinion supports avoidance of unnecessary costs for construction, operations, staffing, and duplication of resource materials.

TELECOURSE PRODUCTION-DISTRIBUTION
Coast Community College District (CCCD)

CCCD has been recognized since the early 1970s as a national leader in the production and distribution of quality comprehensive telecourses. An example is "The Growing Years."

A professional instructional design team tends to every phase of development: film production; instruction; textbooks; study guides, and computer support. In producing films, professional teams are sent all over the globe to televise what previously had been only described by a lecturer. The use of color, commercial production techniques, and specialists in content, instruction, and design combine to provide the finest quality telecourses available.

Based on CCCD experience, the average costs to produce/market/distribute Level I telecourses (most complex) over 7 years is $1,165,856. The average telecourse generates $1,687,506, yielding a difference of $521,662. CCCD costs for a Level IV telecourse (least complex) average $163,950 over 7 years while generating $455,162 income, yielding a difference of $291,212.

Based on local use, CCCD reports a $29,000 institutional savings over 7 years in reduced facilities and faculty. Based on national usage, CCCD calculates student savings in gas, car use, traveling time, and related expenses at $6,300,000 for a Level I telecourse over 7 years and at $1,252,000 for a Level IV telecourse.

SHARED FACILITIES
Auraria Higher Education Center (AHEC)

The initial concept for AHEC was to have separate campuses for a community college, state college, and graduate university surrounding a common library, gymnasium, and student center. The final decision, however, was to have one campus and to create AHEC as a coordinating mechanism. The campuses became operational in 1976 and 1977, but questions of control remain unresolved.

One example of cost effectiveness is the library. Cost avoidance/savings resulting from common computer hardware/telecommunications, OCLC terminals/printers, duplication/office equipment, librarians, and supplies are calculated at $651,400 annually. Other benefits, such as a single security system, have not been analyzed. The greatest cooperative advantage is the larger and more varied holdings made possible by avoiding duplication of acquisitions.

AHEC's FTE cost of instruction also is impressive. The $1,893 FTE cost at the University of Colorado at Denver, which is a part of Auraria, ranged from 9% to 45% lower than Colorado's 5 other doctoral granting institutions in 1978-79. AHEC's $1,477 four-year college FTE costs ranged from 14.5% to 26.3% lower than Colorado's 6 other state colleges. The $1,602 FTE costs for Denver's 3 community colleges, including Auraria, ranged from 9.4% higher to 36% lower for Colorado's 6 other community college districts.

COOPERATIVE ACADEMIC PROGRAMS

For many American institutions, the enrollment declines predicted for the 80s have already begun. As the declines become more widespread, the pressures on low-enrollment departments and programs will intensify. As an alternative to program elimination, institutions in close enough proximity to make academic cooperation feasible should begin now to work together.

The 7 academic program case studies that follow demonstrate very concretely that joint departments and programs can work; do result in cost effectiveness, and do provide special benefits to the cooperating institutions. Investigation has shown that joint programming not only is less expensive but also has been the salvation of many programs that could not be established or maintained without interinstitutional cooperation.

Joint academic long-range planning is the first step for institutions to prepare for academic cooperation. Careful planning that involves faculty and judicious action by faculty and administrators to replace or not replace retirees and those who leave for other reasons can allay faculty fears and can allow departments to conduct orderly and productive transitions.

The cost effectiveness in each case study is demonstrated in different ways, according to the data that were available and the way they were reported. For example, the New Orleans Consortium Department of Social Work, during 1977-78, produced tuition fees and grants in excess of direct costs to the institutions in the amount of $110,200. The Tri-College University Educational Administration Programs would have cost an additional $62,457 during 1977-78 had two independent programs existed rather than a single cooperative one. The joint summer school operated by the Greensboro Regional Consortium has generated $850,000 in project monies for the member institutions over the past 10 years. The Quad-Cities Graduate Study Center operated at a cost to Iowa and Illinois of $1,154,000. This is $1,330,000 less than the cost would have been to the states if the Center's students had enrolled in traditional institutional programs.

Other but less mature programs involving academic cooperation include the New Orleans Consortium's Modern Foreign Language Center and Unique Majors Program, the West Central Wisconsin Consortium's Interinstitutional Review of Existing Programs and Cooperative Curriculum Planning, the Greensboro Regional Consortium's Cooperative Music Degree Program, and the Five Colleges' Cooperative Fine Arts Activities.

In each case, the unanimous conclusion of all program directors is that the same or similar academic services could not be provided as economically as they now are without cooperation among institutions.

DEPARTMENT OF SOCIAL WORK
New Orleans Consortium (NOC)

The NOC Department of Social Work began in 1968 as the Social Welfare Program operated from institutional departments. In 1971, because of problems in budget control relating to program grants, it became a Consortium program. Now designated as the NOC Department of Social Work and accredited as such by the Council of Social Work Education, the enrollment averages 100 majors and produces funds for the institution, in excess of costs.

Institutional funds produced in 1978-79 were $38,100, $62,100, and $10,000, or $110,200 collectively. The funds are determined by calculating the tuition collected from Social Work majors, after which faculty and departmental costs are subtracted. To this figure is then added the grant monies awarded to each institution for the program.

Cooperative cost effectiveness is even more evident when the costs are considered for each institution to have its own major in Social Work. To teach the courses required to maintain accreditation, each institution would have to employ 4 FTE faculty and thereby increase costs 2-3 times. Further, since each institution would be competing for the same students, there could be little hope for increased enrollments. Finally, 3 institutions in one city would not receive grants from the same agencies.

EDUCATIONAL ADMINISTRATION PROGRAMS
Tri-College University (TCU)

The TCU Master of Science and Educational Specialist Degrees involve 3 institutions in North Dakota and Minnesota. TCU is fully accredited by the North Central Association of Colleges and Schools. The program is administered by the consortium with a program chairperson. The objective of the cooperative effort is to prepare elementary and secondary school educators to assume roles as principals and superintendents. Data available for 1977-78 show a full-time equivalent faculty of 3.75 (from North Dakota State and Moorhead State) with courses taught from time to time by faculty from all 3 institutions. The FTE enrollment for 1977-78, at 9 credits per full time student, was 145.

The history of the program indicates that it could not have been implemented except in a cooperative model. The cost effectiveness of the program is illustrated by the data provided by the consortium, which outline the costs of the current effort and the estimated costs of mounting independent programs at 2 member institutions. By comparing such actual and estimated costs of faculty and staff salaries, office supplies, clerical salaries, and equipment, the costs of independent programs are seen to exceed the 1977-78 cost of the cooperative program by $62,457.

GRADUATE STUDY CENTER
Quad-Cities Graduate Study Center (QCGSC)

After community leaders asked the Illinois and Iowa legislatures to offer graduate programs in the Quad-Cities area of almost 500,000 people, the Graduate Center was incorporated in 1969 as a voluntary consortium. QCGSC coordinates the delivery of curricula leading to the master's degree in 9 areas: Business Administration, Criminal Justice, Education, Engineering, English, Physical Education, Public Administration, Regional Studies, and Social Work. QCGSC also arranges for non-degree courses and non-credit programs.

In 1977-78, the Center processed 4,068 registrations for credit, representing 572 FTE. Because 96% of the students hold full-time jobs and average 32 years of age, they tend to be "place-bound." Students save in travel costs, meals, and time; society at large benefits from energy conservation. For the year 1976-77, the Center calculated student travel savings at $1,422,716.

Participating institutions benefit through generating student credit hours which indirectly translate into additional faculty allocations. Illinois and Iowa benefit through not building additional campuses and through reduced educational costs per student. Recent studies presented to the two legislatures suggest an annual savings of $1,330,000 by comparing the Center's costs of $1,154,000 for 621 FTEs to traditional institutional costs of $2,484,000 for the same number of students on campus.

ASTRONOMY DEPARTMENT
Five Colleges, Inc. (FC)

The FC Astronomy Department, an outgrowth of the FC student exchange program, was established in 1959 because of increasingly prohibitive costs for modern astronomy equipment. A joint department made it possible for the institutions to provide students and faculty with access to needed equipment, to recruit quality faculty, to maintain student enrollments, and to attract research funds.

Elementary course enrollments have increased from 219 in 1958 to 2,574 in 1978 and advanced course enrollments have increased from 20 to 149 during the same period. The number of FTE faculty has increased from 4 initially to 19.5 presently. Through the elimination of course duplication, faculty have more time to solicit research grants, to conduct research, and to publish their findings.

Astronomy costs less per course than any of the other sciences at the member institutions. It is particularly in the department's ability to attract faculty who can acquire research funds that the joint program has succeeded in achieving its objectives. A partial listing of grants discloses that the department has attracted more than $1.1 million in grant support since 1977. The small institutions likely would have shared little, if any, in this success in the absence of cooperation with each other.

JOINT SCIENCE DEPARTMENT
Claremont Colleges

In 1964, three of the 6 Claremont Colleges — Scripps, Pitzer, and Claremont Men's — established a Joint Department to provide the science component of their students' general education program. The department offers courses for non-science students; majors in biology, chemistry, physics, and psychobiology; foundation courses that students can supplement in related sciences through cross registration; an emphasis on student/faculty relationships in teaching and research, and a strong interdisciplinary academic experience.

In 15 years, the number of faculty has increased from 3 to 13. They are jointly employed and supervised by the 3 colleges.

Costs for the department are shared according to enrollment formulas. The best evidence of cost effectiveness is the fact that senior administrators and governing boards do not seek to collect data which most academic departments have come to expect will be used to make judgments about performance. Rather, the administrators point to the obvious savings which accrue from having only one classroom/laboratory building complex, and they cite the growth in budget and faculty allocations as evidence of their commitment and belief in the department's value. They also cite the number of courses and majors the department offers which no single institution could offer independently.

BACHELOR OF FINE ARTS DEGREE PROGRAM
Greensboro Regional Consortium (GRC)

The GRC Bachelor of Fine Arts Degree Program was established in 1976 after an evaluation of programs at Greensboro, Guilford, and Bennett Colleges showed course duplication, lack of course options, and loss of good students to other institutions. Since formation of the joint degree program, faculty are hired to provide complementarity, the curriculum is jointly determined, and syllabi are prepared and shared among faculty to avoid content duplication. Students have access to the program through regular cross-registration channels.

After 3 years of operation, the number of majors increased from 45 to 61, non-majors increased from 667 to 854, and faculty increased only 1.5 FTE. In addition to a broader offering of courses, a New York seminar and a European study summer program are available to students. Guilford College converted an old dormitory into an art building and hosts annual summer workshops which net about $15,000 each summer.

The cost effectiveness of the program lies in current costs ($86,715) as opposed to projected costs of each institution attempting to provide the same quality of program individually. At each institution, the cost would be double for minimum effectiveness and triple for the same degree of faculty versatility and course variety.

CONSORTIUM SUMMER SCHOOL
Greensboro Regional Consortium (GRC)

The GRC Summer School began operation in 1969 to serve better the area at less cost to the institutions. The objective of the summer session is to provide courses for regional clientele who must utilize summers for upgrading, certification continuance, and degree completion. Prior to 1969, Bennett did not provide a summer session and Greensboro and Guilford offered only limited programs. Further, even with good enrollments, the summer sessions operated at a loss to the institutions.

In 1977, all summer school operations were moved to the Guilford campus to reduce administrative costs. Faculty are employed from all institutions and students receive course credit through their home-institution. By centralizing the program, the same classrooms are used for day and evening classes, duplication is reduced, and a broader curriculum is offered. Seldom are there classes with less than 10 students.

Each year since 1969, the Summer School has produced income in excess of expenditures. The surplus is distributed to the institutions according to a formula stipulated in the Summer School's Agreement. A total of $759,679 has been distributed to the institutions between 1969-1978. The 1979 summer program anticipated a profit of $80,000.

CONSORTIA AND THEIR PARTICIPATING INSTITUTIONS

Associated Colleges of the Twin Cities (ACTC)

Augsburg College, The College of St. Catherine, College of St. Thomas, Hamline University, Macalester College

Atlanta University Center (AUC)

Atlanta University, Clark College, Interdenominational Theological Center, Morehouse College, Morris Brown College, Spelman College

Auraria Higher Education Center (AHEC)

Community College of Denver/Auraria, Metropolitan State College, University of Colorado at Denver

Boston Theological Institute (BTI)

Andover Newton Theological School, Boston College Department of Theology, Boston University School of Theology, Episcopal Divinity School, Gordon-Conwell Theological Seminary, Harvard Divinity School, Holy Cross Greek Orthodox Seminary, St. John's Seminary, Weston School of Theology

Claremont Colleges

Claremont Men's College, Pitzer College, Scripps College

Coast Community College District

Coastline Community College, Huntington Beach Library and Cultural Center, national

Council of West Suburban Colleges (CWSC)

Elmhurst College, George Williams College, Illinois Benedictine College (and St. Procopius Abbey), North Central College, Benet Academy

Dayton-Miami Valley Consortium (DMVC)

Air Force Institute of Technology, Central State University, Clark Technical College, Educational Opportunities Center, Kettering College of Medical Arts, Sinclair Community College, Southern State College, University of Dayton, United Theological Seminary, Urbana College, Wilberforce University, Wilmington College, Wright State University, Wright-Patterson Air Force Base

Five Colleges, Inc.

Amherst College, Hampshire College, Mount Holyoke College, Smith College, University of Massachusetts at Amherst

Graduate Theological Union (GTU)

American Baptist Seminary of the West, Church Divinity School of the Pacific, Dominican School of Philosophy and Theology, Franciscan School of Theology, Jesuit School of Theology at Berkeley, Pacific Lutheran Theological Seminary, Pacific School of Religion, San Francisco Theological Seminary, Starr King School for the Ministry, Graduate Theological Union, Center for Urban-Black Studies, Center for Judaic Studies, Center for Women and Religion, School of Applied Theology, Center for Ethics and Social Policy, the Berkeley Priory and the Institute for Thomistic and Ecumenical Studies, Center for Hermeneutical Studies (in Hellenistic and Modern Culture), Program for the Study of New Religious Movements in America, Pacific and Asian American Center for Theology and Strategies

Greater Cincinnati Library Consortium (GCLC)

Cincinnati Bible Seminary, Cincinnati Country Day School, Cincinnati Technical College, College of Mt. Saint Joseph, Edgecliff College, Northern Kentucky University, Thomas More College, University of Cincinnati, UC Raymond Walker Branch, Ursuline Academy, Xavier University

Greensboro Regional Consortium (GRC)

Bennett College, Guilford College, Greensboro College

Hudson-Mohawk Association of Colleges & Universities (HMACU)

Albany College of Pharmacy, Albany Medical College, The College of Saint Rose, Hudson Valley Community College, Maria College, Rensselaer Polytechnic Institute, Russell Sage College, Schenectady County Community College, Siena College, Skidmore College, Union College

John Wood Community College (JWCC)

Culver-Stockton College, Gem City College, Hannibal-LaGrange College, John Wood Community College, Quincy Beauty Academy, Quincy College, Quincy Technical Schools, Southeastern Community College

Massachusetts Higher Education Consortium (MHEC)

(Forty-one colleges and universities in Massachusetts, including eleven private institutions)

Mid-Coast Community College Services (MCCCS)

University of Maine at Augusta, high schools, libraries, vocational-technical institutes, hospitals, museums

New Hampshire College and University Council (NHCUC)

Colby-Sawyer College, Franklin Pierce College, Keene State College, Mount St. Mary College, Nathaniel Hawthorne College, New England College, New Hampshire College, New Hampshire State Library, Notre Dame College, Plymouth State College, Rivier College, St. Anselm's College, University of New Hampshire, UNH Merrimack Valley Branch, UNH School of Continuing Studies

New Orleans Consortium (NOC)

Loyola University, St. Mary's Dominican College, Xavier University of Louisiana

Pittsburgh Council on Higher Education (PCHE)

Carlow College, Carnegie Mellon University, Chatham College, Community College of Allegheny County, Duquesne University, La Roche College, Pittsburgh Theological Seminary, Point Park College, Robert Morris College, University of Pittsburgh

Quad-Cities Graduate Study Center (QCGC)

Augustana College, Iowa State University, Marycrest College, Northern Illinois University, Southern Illinois University, Sangamon State University, University of Illinois, University of Iowa, University of Northern Iowa, Western Illinois University

Rochester Regional Research Library Council (RRRLC)

Colgate Divinity School, College Center of the Finger Lakes, Convalescent Hospital, General Railway Signal, Highland Hospital, Hobart and William Smith Colleges, Kodak Research Library, Lincoln First Bank, Monroe Community College, Monroe Developmental Center, Nazareth College, Roberts Wesleyan College, Rochester Institute of Technology, Saint John Fisher College, State University of New York at Brockport, SUNY at Geneseo, University of Rochester

Tri-College University (TCU)

Concordia College, Moorhead State University, North Dakota State University

Union of Independent Colleges of Art (UICA)

Atlanta College of Art, California College of Arts and Crafts, Center for Creative Studies-College of Art and Design, Cleveland Institute of Art, Kansas City Art Institute, Maryland Institute College of Art, Minneapolis College of Art and Design, Philadelphia College of Art, School of the Art Institute of Chicago

University Center of Georgia, Inc. (UCG)

Agnes Scott College, Atlanta College of Art, Atlanta Public Library, Atlanta University Center, Columbia Theological Seminary, Emory University, Georgia Institute of Technology, Georgia State University, Oglethorpe University, University of Georgia

York County Community College Services (YCCCS)

University of Southern Maine, Southern Maine Vocational Technical Institute, high schools, public libraries, hospitals, churches, Nasson College

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